National Aeronautics and Space Administration

NASA Response Plan to NRC Report and Discussion

NAC Technology and Innovation Committee Meeting

Mason Peck, Chief Technologist

March 6, 2012

NASA Technology – A Path Forward

- **Success in executing future NASA space missions will depend on advanced technology developments.**

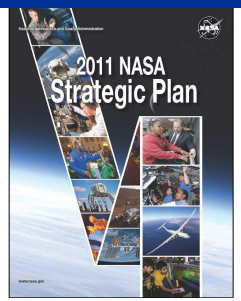
- **NASA technology development efforts must address the needs of NASA's missions, enabling human exploration, scientific discovery, as well as contribute to critical national and commercial needs in space technology.**

- **Technologies prioritized in the NASA Space Technology Roadmaps and the NRC study represents a foundation upon which NASA can build a 4-Year NASA Strategic Technology-Investment Plan.**

- **<u>WHAT IS A NASA STRATEGIC TECHNOLOGY–INVESTMENT PLAN?</u>**
  - **A set of strategically linked technology investments**
  - **Planned and managed collectively**
  - **To ensure high priority goals are achieved**
  - **To avoid unnecessary duplication**
  - **To optimize the overall return and infusion**
  - **While maintaining allowable risk, schedule and resource allotments.**

NASA Strategic Technology-Investment Plan

NASA Strategic Plan



Strategic Technology-Investment Plan

NASA's
- Current Technology Investments
- MD Technology Priorities
- Budget Constraints
- Center Capabilities/Facilities

NASA Space Technology Roadmaps

NRC Roadmap Analysis & Priorities

and Other Govt. Agency Partnership Opportunities

DoD, NRL, FAA, NRO, Space Command, DoE, AFRL, DARPA

ARMD

HEOMD

SMD

STP

Creating the 4-Year NASA Strategic Technology-Investment Plan

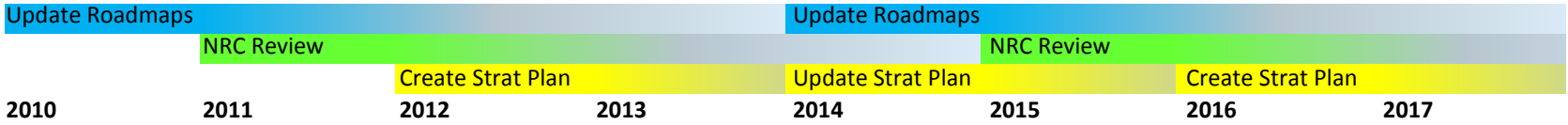
Goal: 4-year Plan to guide Agency's Future Technology Investments.

- Guide Agency calls for technology proposals in FY 2013 to achieve priorities
- Guide Agency technology partnering activities
- Influence portions of the FY 2014 budget request that involve technology programs

Creating the 4-Year NASA Strategic Technology-Investment Plan

Development and Maintenance:

- Create 4-year plan (led by OCT with support from MD/Centers)
- Every year:
  - Provide cross-Agency guidance on aggregate technology-program content
- Every 2 years:
  - Update gap analysis and 4-year Strategic Technology-Investment Plan
  - NAC T&I provides independent sanity check of the plan
- Every 4-years:
  - Update 20 year Technology Roadmap – evaluate state of art (including any new technology breakthroughs), incorporate new Decadals, MD design reference missions, etc
  - NRC evaluation of 20 year Technology Roadmap



Creating the 4-Year NASA Strategic Technology-Investment Plan

OCT SI will coordinate development of NASA Strategic Technology- Investment Plan with support from MD and Center Chief Technologists

- **Finalize MD Technology priorities**
- **Generate list of current Agency technologies development activities/projects**
- **Identify budget constraints**
- **Identify Center technology capabilities/facilities**
- **Identify (OGA, commercial) partners with interest in gap areas**
- **Identifying gap areas**
- **Integrate roadmaps, NRC priorities and recommendations**
- **Prepare 4-year plan to fund technologies in gap areas**

Plan Forward

Creating NASA Strategic Technology-Investment Plan	Due Date
MD/Office Technology Priorities	**April 30, 2012**
List of NASA Tech Development Projects/Activities	**April 30, 2012**
List of MD/Office Cross Infusion Opportunities	**April 30, 2012**
List of OGA Shared Needs and Partnership Opportunities	**May 30, 2012**
Analysis – Agency Technology Investments vs. Gaps vs. NRC report	**May 30, 2012**
Version #1 NASA 4-year Strategic Technology-Investment Plan for Agency Review	**June 15, 2012**
Version #2 NASA 4-year Strategic Technology-Investment Plan	**July 30, 2012**
Independent Assessment of NASA Strategic Technology-Investment Plan (NAC – T&I / Independent Deliberative Panel)	**August 1, 2012 – August 15, 2012**
Final NASA 4-year Strategic Technology-Investment Plan	**September 15, 2012**

NTEC Discussion:
Redlines /Additions to Plan?
Concur on Plan?